

comprising:

a chamber for sealingly storing a laser gas therein;  
a discharging electrode for exciting the laser gas through electrical discharging;

a total reflection mirror for amplifying laser light  
produced by the electrical discharging from said discharging electrode;

an output window for amplifying the laser light and  
for outputting a portion of the laser light amplified between said total reflection mirror and said output window;

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*D2  
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a blower for circulating the laser gas within said chamber, so that the laser gas passing an electrical discharging region of said discharging electrode is circulated in said chamber and is returned to the electrical discharging region of said discharging electrode; and

control means for controlling said blower in accordance with a state of the electrical discharging from said discharging electrode, including first means for controlling rotation of the blower in a stand-by state in which no laser gas is excited by the electrical discharging from said discharging electrode and thus no laser light is emitted whereas an output of the laser light is being prepared, and second means for controlling rotation of the blower in an in-operation state in which the laser gas is excited by the electrical discharging from

said discharge electrode and the laser light is being outputted.

2. (Three Times Amended) A gas laser device

according to Claim 1, wherein said first rotation control means  
controls rotation of said blower when said gas laser device is in  
the stand-by state by stopping the blower.

8. (Three Times Amended) A gas laser device

according to Claim 7, wherein said first rotation control means  
controls rotation of said blower when said gas laser device is in  
the stand-by state by stopping the blower.

13. An exposure apparatus, comprising:

a laser light source having (i) a chamber for  
sealingly storing a laser gas therein, (ii) a discharging  
electrode for exciting the laser gas through electrical  
discharging, (iii) a total reflection mirror for amplifying laser  
light produced by the electrical discharging from said  
discharging electrode, (iv) an output window for amplifying the  
laser light and for outputting a portion of the laser light  
amplified between said total reflection mirror and said output  
window, and (v) a blower for circulating the laser gas within  
said chamber so that the laser gas passing an electrical  
discharging region of said discharging electrode is circulated in

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said chamber and is returned to the electrical discharging region of said discharging electrode;

a main assembly for exposing a substrate to the laser light from said laser light source; and

control means for controlling said blower in accordance with a state of electrical discharging of said discharging electrode including first means for controlling rotation of the blower in a non-exposure-operating state in which no laser gas is excited by the electrical discharging from said discharging electrode and thus no laser light is emitted whereas an output of the laser light is being prepared, and second means for controlling rotation of the blower in an exposure state in which the laser gas is excited by electrical discharging from said discharging electrode and the laser light is being outputted.

C4  
cont'd

14. (Twice Amended) An apparatus according to Claim 13, wherein said control means further comprises means for increasing a rotation speed of said blower in response to a start of an exposure job in which the exposure operation is performed through said main assembly.

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D7

20. (Three Times Amended) A semiconductor device manufacturing method comprising

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C6  
D10

sealingly storing a laser gas in a chamber;  
exciting, using a discharging electrode, the laser  
gas through electrical discharge;

amplifying laser light produced by the electrical  
discharging from said discharging electrode by a total  
reflection mirror;

amplifying the laser light by an output window and  
outputting a portion of the laser light amplified between said  
total reflection mirror and said output window;

circulating, using a blower, the laser gas within  
the chamber, so that the laser gas passing an electrical  
discharging region of the discharging electrode is circulated  
in the chamber and is returned to the electrical discharging  
region of the discharging electrode; and

controlling rotation of the blower in accordance  
with a state of electrical discharging from said discharging  
electrode including controlling rotation of the blower in a  
stand-by state in which no laser gas is excited by the  
electrical discharging from said discharging electrode and thus  
no laser light is emitted whereas an output of the laser light  
is being prepared, and differently controlling rotation of the  
blower in an in-operation state in which the laser gas is  
excited by the electrical discharging from said discharge  
electrode and the laser light is being outputted.

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